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10/542,853	07/11/2005	Naoharu Yanagawa	041465-5266	7322

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EXAMINER	
YODICHKAS, ANEETA	
ART UNIT	**PAPER NUMBER**
2627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,853	YANAGAWA ET AL.	
	Examiner	Art Unit	
	Aneeta Yodichkas	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6 and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Pub. No. 2002/0154585 A1 to *Adachi*.

As to **claim 1**, *Adachi* discloses a tracking servo control device for making a tracking servo control to apply a light beam onto a groove track on a recording medium where the groove track and a pre-pit are preformed, comprising: a first generation device which generates a first regenerative signal based on a reflected light from the recording medium at a particular time when at least a part of the pre-pit is formed within a radiation range of the light beam onto the groove track (Fig. 1-4, paragraph 0039, where the first regenerative signal is prepit position signal (Pp)); a second generation device which generates a second regenerative signal based on a reflected light from the recording medium at a different particular time when the pre-pit is formed outside the radiation range of the light beam (Fig. 1-4, paragraph 0039, where the second regenerative signal is end position signal (Pe) and it is sent at a different time from the first regenerative signal); and a calculation device which calculates an offset value in the tracking servo control based on both the first regenerative signal and the second regenerative signal that are generated (Fig. 1-4, paragraph 0039, where CPU (27)

calculates the difference between the prepit signal (Pp) and the end position signal (Pe)).

As to **claims 6 and 18-21**, *Adachi* discloses limitations similar to those disclosed in claim 1 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-4, 7-10, 12-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub. No. 2002/0154585 A1 to *Adachi* in view of U.S. Patent No. 6,744,721 B2 to *Kamioka et al.*

As to **claims 2 and 7**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the amplitude value of the first regenerative signal and the amplitude value of the second regenerative signal is minimized.

However, *Kamioka* discloses the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the amplitude value of the first regenerative signal and the amplitude value of the second regenerative signal is minimized (Fig. 5-7B, column 9, lines 49-55), where the amplitude of amplifier (11) is minimized.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have modified the tracking servo device as taught by *Adachi* by including minimizing the amplitude of the detected offset as taught by *Kamioka*. The suggestion/motivation would have been in order to digitize the pre-pit signal so that the signal can be sliced (Kamioka, column 9, lines 49-67).

As to **claim 3**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the lower peak value of the first regenerative signal and the lower peak value of the second regenerative signal is minimized.

However, *Kamioka* discloses the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the lower peak value of the first regenerative signal and the lower peak value of the second regenerative signal is minimized (Fig. 5-7B, column 9, lines 49-55), where the amplitude of amplifier (11) is minimized including the lower peaks of the amplitude. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 4**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the upper peak value of the first regenerative signal and the upper peak value of the second regenerative signal is minimized.

However, *Kamioka* discloses the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the upper peak value of the first regenerative signal and the upper peak value of the second

regenerative signal is minimized (Fig. 5-7B, column 9, lines 49-55), where the amplitude of amplifier (11) is minimized including the upper peaks of the amplitude. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 8**, *Adachi* is deficient in disclosing the tracking servo control device, comprising a third generation device for generating a third regenerative signal based on a reflected light from the recording medium for the light beam when the pre-pit is formed outside the radiation range of the light beam, wherein the control device calculates the offset value so that a difference between the upper peak value of the third regenerative signal and an average value of the upper peak value of the first regenerative signal and the upper peak value of the second regenerative signal is minimized.

However, *Kamioka* discloses the tracking servo control device, comprising a third generation device for generating a third regenerative signal based on a reflected light from the recording medium for the light beam when the pre-pit is formed outside the radiation range of the light beam, wherein the control device calculates the offset value so that a difference between the upper peak value of the third regenerative signal and an average value of the upper peak value of the first regenerative signal and the upper peak value of the second regenerative signal is minimized (Fig. 3-4C and 7A-B, column 6, lines 56-63), where the third generation device is photodetector (6b) and the amplitude is minimized as shown in Fig. 7A-B. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 9**, *Adachi* is deficient in disclosing the tracking servo control device, comprising a third generation device for generating a third regenerative signal based on

a reflected light from the recording medium for the light beam when the pre-pit is formed outside the radiation range of the light beam, wherein the calculation device calculates the offset value so that a difference between the lower peak value of the third regenerative signal and an average value of the lower peak value of the first regenerative signal and the lower peak value of the second regenerative signal is minimized.

However, *Kamioka* discloses the tracking servo control device, comprising a third generation device for generating a third regenerative signal based on a reflected light from the recording medium for the light beam when the pre-pit is formed outside the radiation range of the light beam, wherein the calculation device calculates the offset value so that a difference between the lower peak value of the third regenerative signal and an average value of the lower peak value of the first regenerative signal and the lower peak value of the second regenerative signal is minimized (Fig. 3-4C and 7A-B, column 6, lines 56-63), where the third generation device is photodetector (6b) and the amplitude is minimized as shown in Fig. 7A-B. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 10**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the lower peak value of the third regenerative signal and an average value of the lower peak value of the first regenerative signal and the lower peak value of the second regenerative signal is minimized.

However, *Kamioka* discloses the tracking servo control device, wherein the calculation device calculates the offset value so that a difference between the lower peak value of the third regenerative signal and an average value of the lower peak value of the first regenerative signal and the lower peak value of the second regenerative signal is minimized (Fig. 3-4C and 7A-B, column 6, lines 56-63), where the third generation device is photodetector (6b) and the amplitude is minimized as shown in Fig. 7A-B. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 12**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in a continuous area where the information pits are formed.

However, *Kamioka* discloses the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in a continuous area where the information pits are formed (Fig. 5, column 7, lines 26-40), where the calculation device or balance controller (12) uses the values from signals c and d, which are from the information pits. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 13**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in a linking area of the recording medium.

However, *Kamioka* discloses the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in a linking area of the recording medium (Fig. 5, column 7, lines

26-40), where the calculation device or balance controller (12) uses the values from signals c and d, which are from the information pits. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 14**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in a preset area for adjusting the light quantity of the light beam.

However, *Kamioka* discloses the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in a preset area for adjusting the light quantity of the light beam (Fig. 13 and 14, column 13, lines 51-64), where the light quantity or light intensity is changed. In addition, the same motivation is used as the rejection in claim 2.

As to **claim 16**, *Adachi* is deficient in disclosing the tracking servo control device, wherein the formation pattern of the information pit is constant.

However, *Kamioka* discloses the tracking servo control device, wherein the formation pattern of the information pit is constant (Fig. 1, column 5, lines 27-36), where the information pit is linear, or constant. In addition, the same motivation is used as the rejection in claim 2.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub. No. 2002/0154585 A1 to *Adachi* in view of U.S. Patent No. 6,744,721 B2 to *Kamioka et al.* in further view of U.S. Patent No. 6,396,799 B1 to *Nagasawa et al.*

As to **claim 5**, *Adachi* and *Kamioka* are deficient in disclosing the tracking servo control device, wherein the calculation device calculates the offset value so that the sum of an error count of information obtained from the first regenerative signal and an error count of information obtained from the second regenerative signal is minimized.

However, *Nagasawa* discloses the tracking servo control device, wherein the calculation device calculates the offset value so that the sum of an error count of information obtained from the first regenerative signal and an error count of information obtained from the second regenerative signal is minimized (Fig. 15A-B, column 19, lines 54-64), where the waveform tracking signal is used in counting the number of errors.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have modified the tracking servo control device as taught by *Adachi* and *Kamioka* by including error counting as taught by *Nagasawa*. The suggestion/motivation would have been in order to control the track crossing speed by counting the tracking error signal (Nagasawa, column 19, lines 54-64).

As to **claim 11**, *Adachi* and *Kamioka* are deficient in disclosing the tracking servo control device, wherein the calculation device calculates the offset value so that the sum of an error count of data obtained from the first regenerative signal and an error count of data obtained from the second regenerative signal is minimized.

However, *Nagasawa* discloses the tracking servo control device, wherein the calculation device calculates the offset value so that the sum of an error count of data obtained from the first regenerative signal and an error count of data obtained from the second regenerative signal is minimized (Fig. 15A-B, column 19, lines 54-64), where the

waveform tracking signal is used in counting the number of errors and is minimized when the speed is minimized. In addition, the same motivation is used as the rejection in claim 5.

Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub. No. 2002/0154585 A1 to *Adachi* in view of U.S. Patent No. 6,744,721 B2 to *Kamioka et al*. in further view of U.S. Patent No. 6,754,157 B2 to *Osada*.

As to **claim 15**, *Adachi* and *Kamioka* are deficient in disclosing the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in one area of the recording medium where the information pits are formed, the information pits being subjected to an error detection/correction with an error detection/correction code.

However, *Osada* discloses the tracking servo control device, wherein the calculation of the offset value by the calculation device is made employing the information pits formed in one area of the recording medium where the information pits are formed, the information pits being subjected to an error detection/correction with an error detection/correction code (Fig. 2, column 14, lines 63-67), where there is an error correction code.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have modified the tracking servo control device as taught by *Adachi* and *Kamioka* by including an error correction code as taught by *Osada*. The suggestion/motivation would have been in order to correct errors on the disc (Osada, column 14, lines 63-67).

As to **claim 17**, *Adachi* and *Kamioka* are deficient in disclosing the tracking servo control device, wherein the information pit is employed for recording the information recorded with an error detection/correction code, and the position of the information pit on the recording medium is specified by the error detection/correction code.

However, *Osada* discloses the tracking servo control device, wherein the information pit is employed for recording the information recorded with an error detection/correction code, and the position of the information pit on the recording medium is specified by the error detection/correction code (Fig. 2, column 14, lines 63-67), where there is an error correction code, where the position is specified in the error correction code. In addition, the same motivation is used as the rejection in claim 15.

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aneeta Yodichkas whose telephone number is (571) 272-9773. The examiner can normally be reached on Monday-Thursday 8-5, alternating Fridays, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Vincent Agustin/
Primary Examiner, Art Unit 2627

/A.Y./
12/14/09